

ABSTRACT

Embodiments of the present invention comprise systems, methods, and devices for amplifying electromagnetic signals by decomposing each signal into a plurality of near-constant envelope signals, removing residual amplitude modulation from these signals, amplifying each signal independently, and recombining the amplified signals. In the preferred embodiment a plurality of control signals, each corresponding to the magnitude of a respective near-constant envelope signal, is employed to amplify each near-constant envelope signal in inverse proportion to its corresponding control signal. This inverse amplification preferably eliminates any unwanted residual amplitude modulation thus producing an amplified constant envelope signal. The plurality of amplified constant envelope signals is then preferably combined to form an amplified version of the incoming signal.